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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/486,264 | 05/12/2000 | GREGOR SCHWEGLER | 2046/48639 | 3695 |

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EXAMINER

KILKENNY, TODD J

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1733

DATE MAILED: 01/17/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/486,264

Applicant(s)

SCHWEGLER, GREGOR

Examiner

Todd J. Kilkenney

Art Unit

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 06 November 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- ☐ Interview Summary (PTO-413) Paper No(s) _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 11/6/02 has been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.
2. The Patent and Trademark Office no longer makes drawing changes. See 1017 O.G. 4. It is applicant's responsibility to ensure that the drawings are corrected. Corrections must be made in accordance with the instructions below.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.185(a). Failure to take corrective action within the set (or extended) period will result in **ABANDONMENT** of the application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 7 and 9 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art (Specification, page 2, lines 28 – page 3, line 36) in view Ragout (US 4,467,836) and Champleboux et al. (US 4,895,185). The rejection of record is maintained and herein incorporated as reference.

5. Claim 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art (Specification, page 3, lines 24 - 36) in view Ragout (US 4,467,836) and Champleboux et al. (US 4,895,185) as applied to claim 1 above, and further in view of Meier et al. (US 5,937,606). The rejection of record (see Paper No. 12) is maintained herein incorporated as reference.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art (Specification, page 2, lines 28 – page 3, line 36) in view Ragout (US

4,467,836) and Champleboux et al. (US 4,895,185) as applied to claim 11 above, and further in view of Hertzberg (US 4,966,802).

The rejection of record (Paper No. 12) takes the position that splitting carbon panels in a fiber direction is "well known, conventional per se, in the carbon composite art". Hertzberg is now applied as reference to reinforce this contention. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to split the ends of the carbon panel of the admitted prior art in a fiber direction, as such is the known direction of carbon panel splitting as evidenced for example by Hertzberg.

Response to Arguments

7. Applicant's arguments filed 11-6-02 have been fully considered but they are not persuasive.

In response to applicant's argument that the secondary references to Ragout and Champleboux et al are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the examiner recognizes that neither Ragout nor Champleboux et al provides a teaching that is in the field of applicant's endeavor of reinforcing supporting structures with carbon panels. However, both Ragout and Champleboux et al are pertinent to the particular problem with which applicant's invention is concerned. Applicant's invention is recognized as relating to

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splitting the ends of a reinforcement panel so as to strengthen the connection of the reinforcement panel to its supporting structure in such a fashion that separation becomes practically impossible (Applicant's specification, page 4, lines 1 – 27). This particular problem is addressed in the secondary references as both Ragout and Champleboux et al teach splitting the ends of reinforcement and positioning these split ends in a spaced apart relationship so as to be "attached extremely firmly to rigid end pieces in order to allow the entire assembly to resist very significant forces" (Ragout; Column 1, lines 50 – 55) by producing a self-locking fit that increases the connection in response to any tensile load exerted on the reinforcing plies (Ragout; Column 3, lines 15 – 21); and as disclosed by Champleboux et al. to increase the linking quality between the reinforcing devices and the end pieces to which they are linked (Champleboux et al.; Column 1, lines 31 – 44). That is, the secondary references to Ragout and Champleboux et al are both related to creating a stronger attachment between a reinforcing material and its corresponding reinforced structure and achieve this stronger attachment by splitting the ends of the reinforcement material.

As to applicant's argument that it would not have been obvious to split an end of a CFK panel in view of the secondary references teaching to split metal elements such as cables or metal layers because splitting a CFK panel is crucial and implements a high risk of damaging or breaking the fibers and therefore it is not known, and it would not have been obvious, to split an end of a CFK panel, the examiner disagrees. Again, it is noted that the secondary references to Ragout and Champleboux et al are cited for suggesting splitting the ends of reinforcement material to obtain a stronger attachment.

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As to splitting of a carbon panel, it is the examiner's position that such would have been obvious in view of the teachings of Ragout and Champleboux et al as described above, wherein the ability to split carbon panels is well known in the carbon composite art as evidenced for example in the manufacture of reinforcing T-beams or I-beams (see reference of record to Hertzberg).

Applicant's argument that the present invention (claims 11 – 13) discloses that the carbon panels are held at their ends and glued onto the surface to be reinforced along the whole length of the reinforcing element which differs from the reinforcing elements of Ragout and Champleboux is not persuasive. As stated in the rejection of record, the admitted prior art is cited as it discloses that it is known to anchor carbon panels at their ends (specification, page 2, lines 28 – 35) and in some known instances glue them in a pretensioned state to the face of the supporting structure (specification, page 3, lines 24 – 36). The secondary references to Ragout and Champleboux et al are combined with this teaching to render obvious spitting of the carbon panel end for anchoring.

As to applicant's comments in regard to the Meier reference, the examiner recognizes that Meier does not disclose an end element that receives split ends of a carbon panel. However, Meier was applied as evidence that is known to fasten anchoring means to the structural element being reinforced by mechanical fastening means, such as screws, bolts, loops etc (Meier, Col. 8, lines 20 – 26), which although Meier teaches a wedge as anchoring means, one of ordinary skill in the art would readily appreciate that Meier's teaching to fasten anchoring means by screws, bolt,

loops, etc would be pertinent to a variety of anchoring means, including an end element that receives split ends of the reinforcing carbon panel.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

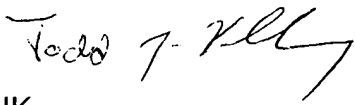
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

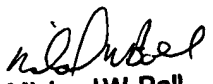
Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is **(703) 305-6386**. The examiner can normally be reached on Mon - Fri (9 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


TJK
January 14, 2003


Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700